SYNTHETIC EXAMPLE DATA. NOT A REAL CORRIDOR.

SYNTHETIC EXAMPLE NORTHBOUND

Corridor congestion evidence from NPMRDS for a Congestion Relief Program application (FHWA-CRPP-27-001)

Location
SYNTHETIC EXAMPLE NORTHBOUND, EXAMPLE County, XX

Readings
2025-01-01 to 2025-12-31

Segments
6 segments, 5.30 miles

Engine
corridor/0.1.0, TollSim Studio

The notice's Criterion 1 tests

- ● **Meets** Travel time index, weekday peaks: 1.30 (test: 1.07 or more).
- ● **Meets** Planning time index, weekday peaks: 1.52 (test: 1.35 or more).
- ◆ **Compare** Interstate level of travel time reliability: 100.0% of vehicle-miles reliable (test: enter the State DOT's or MPO's PM3 target to compare).
- ◆ **Compare** Truck travel time reliability (Interstate): 1.22 (test: enter the State DOT's or MPO's PM3 target to compare).
- ◆ **Compare** Peak hour excessive delay: 18,583 person-hours over 261 weekdays, worth $382,408 at USDOT values (test: compare with the area's PHED target, which is per person for the whole urbanized area).

Criterion 1A is met by a travel time index of 1.07 or more, a planning time index of 1.35 or more, or a corridor that misses its State DOT's or MPO's PM3 targets (NOFO Section F.1).

Corridor travel time

Measure	Value
Travel time index, a.m. peak	1.25
Travel time index, p.m. peak	1.36
Travel time index, both peaks	1.30
Planning time index, both peaks	1.52
Free-flow travel time	5.0 min

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Measure	Value
Mean peak travel time	6.5 min
95th-percentile peak travel time	7.6 min
Peak intervals used	6,264
Travel time index, weighted by vehicle-miles (as FHWA's report)	1.30
Planning time index, weighted by vehicle-miles	1.52

Most congested segment

000+00004 (Example exit 4) has the corridor's highest planning time index, 1.71, with a travel time index of 1.41. For Criterion 1C (a congestion chokepoint) and 2B (bottlenecks), the applicant shows how the project addresses it without reducing travel lanes.

Segments

TMC	Location	Miles	TTI	PTI
000+00001	Example exit 1	0.62	1.25	1.42
000+00002	Example exit 2	0.95	1.29	1.50
000+00003	Example exit 3	1.10	1.39	1.67
000+00004	Example exit 4	0.48	1.41	1.71
000+00005	Example exit 5	0.80	1.32	1.55
000+00006	Example exit 6	1.35	1.22	1.38

Reliability by segment

TMC	Worst LOTTR	Reliable	TTTR
000+00001	1.10	Yes	1.19
000+00002	1.13	Yes	1.21
000+00003	1.15	Yes	1.26

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TMC	Worst LOTTR	Reliable	TTTR
000+00004	1.17	Yes	1.29
000+00005	1.13	Yes	1.23
000+00006	1.09	Yes	1.16

Reliable share: 100.0%, weighted by vehicle-miles. All on the Interstate: 100.0%. Truck travel time reliability index (Interstate segments): 1.22.

Reliability by period (LOTTR)

TMC	Weekdays 6–10 a.m.	Weekdays 10 a.m.–4 p.m.	Weekdays 4–8 p.m.	Weekends 6 a.m.–8 p.m.
000+00001	1.10	1.05	1.09	1.05
000+00002	1.13	1.05	1.12	1.05
000+00003	1.15	1.04	1.15	1.06
000+00004	1.17	1.03	1.16	1.07
000+00005	1.13	1.04	1.12	1.06
000+00006	1.08	1.05	1.09	1.05

Peak hour excessive delay

18,583 person-hours of excessive delay over 261 weekdays (peaks 6–10 a.m. and 4–8 p.m.), 10,261 car and 1,140 truck vehicle-hours. At USDOT's values that delay is worth $382,408.

Criterion 2A: if the project cuts this delay by 20%, it saves 3,717 person-hours and $76,482 over the same 261 weekdays: $68,000 for car travelers (households and businesses) and $8,482 for truck operators. The reduction is the applicant's estimate.

TMC	Speed limit (mph)	Threshold time	Person-hours
000+00001	60	62 s	1,880
000+00002	60	95 s	2,856
000+00003	60	110 s	4,490

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TMC	Speed limit (mph)	Threshold time	Person-hours
000+00004	60	48 s	1,845
000+00005	60	80 s	3,158
000+00006	60	135 s	4,355

Hourly traffic shares: FHWA count stations on the nation's urban Interstates and freeways, weekdays, 2025 (https://geodata.bts.gov/datasets/usdot::travel-monitoring-analysis-system-volume/about).

Text for the Application Template

> **Section II, item 2: location of facility.** SYNTHETIC EXAMPLE NORTHBOUND, EXAMPLE County, XX. NPMRDS segments: 000+00001, 000+00002, 000+00003, 000+00004, 000+00005, 000+00006.

> **Section IV, Criterion #1, Objective A.** NPMRDS travel times for the project corridor (SYNTHETIC EXAMPLE NORTHBOUND, 5.30 miles, 6 segments) from 2025-01-01 to 2025-12-31 give a weekday peak travel time index of 1.30 and a planning time index of 1.52, computed with the definitions FHWA uses in its Urban Congestion Report. Both meet the notice's thresholds (1.07 and 1.35).

> **Section IV, Criterion #1, Objective C.** The corridor's most congested segment is 000+00004 (Example exit 4), with its highest planning time index, 1.71, and a travel time index of 1.41.

> **Section IV, Criterion #2, Objective A.** Weekday peak hour excessive delay on the corridor totaled 18,583 person-hours over 261 weekdays from 2025-01-01 to 2025-12-31, worth $382,408 at USDOT's values of time (December 23, 2025 guidance; 2024 dollars). Cutting that delay by 20% would save 3,717 person-hours and $76,482: $68,000 for car travelers and $8,482 for truck operators.

These sentences state what the data shows. Check each against the project before using it, and add how the project addresses the congestion (Objectives B to D). The template limits Section IV to six pages.

Method

The travel time and planning time indexes follow the definitions in FHWA's Urban Congestion Report. Peak is weekdays 6–9 a.m. and 4–7 p.m. Free-flow is the

85th-percentile off-peak speed (weekdays 9 a.m.–4 p.m. and 7–10 p.m., weekends 6 a.m.–10 p.m.), so for a segment the 15th-percentile off-peak travel time.

Travel time index: mean peak travel time over free-flow travel time. Planning time index: 95th-percentile peak travel time over free-flow travel time. Percentiles are nearest-rank.

The corridor's travel time at each 15-minute interval is the sum of its segments' travel times, using only intervals where every segment has a reading.

Reliability follows 23 CFR 490.511: in each of the four periods, the 80th-percentile travel time over the 50th, each rounded to whole seconds; a segment is reliable when every period scores below 1.50. Truck reliability (490.611) uses the 95th percentile, adds an overnight period, and covers Interstate segments.

The reliable share is weighted by vehicle-miles (FHWA's one-way and two-way factors on AADT and NHS length) when every segment has AADT, and by length otherwise. Interstate and non-Interstate NHS segments are reported apart, as PM3 reports them, using the TMC file's f_system.

Peak hour excessive delay follows 23 CFR 490.711 and FHWA-HIF-18-040. Peaks are weekdays 6–10 a.m. and 3–7 or 4–8 p.m. The threshold speed is the greater of 20 mph and 60% of the posted limit. Delay above the threshold travel time counts in each 15-minute interval.

Volumes follow HIF-18-040's estimation method: AADT, halved on two-way facilities, times its national monthly (Table 1.1) and day-of-week (Table 1.2) factors, times the hour's share of daily traffic. Person-hours use FHWA's occupancy factors (1.7 per car, 1.0 per truck); buses are left out.

Dollars use USDOT's Benefit-Cost Analysis Guidance (December 23, 2025; 2024 dollars): 1.52 people per car at $21.80 an hour, and truck drivers at $37.20 an hour.

How DOT can check these numbers

FHWA can reproduce every figure from NPMRDS in RITIS: export the segments below for 2025-01-01 to 2025-12-31, at 15-minute averaging with travel time in seconds, for all vehicles and for trucks. Apply the method above, or load the same files into the free corridor tool at https://congestiondata.org/studio/corridor/, which runs the same engine (corridor/0.1.0). The same files give the same numbers, and each file's SHA-256 is listed below.

Segments: 000+00001, 000+00002, 000+00003, 000+00004, 000+00005, 000+00006.

Input files

File	Bytes	SHA-256
synthetic-readings.csv (all vehicles)	7,571,507	bda71ec8182dd94fd40ca23cb9cb9ed8a7fb972c5c74aa01941e1691c25c9c40
synthetic-TMC_Identification.csv (segments)	945	ffa76f0f04c1622cfd5ff0a682f7f9e07719fcac7ceaafc5762b2a7a00834bcc
synthetic-trucks.csv (trucks)	7,575,976	f3afd6ce837ca755763a1c573143f06dc8424ef05c416febc5eabf3fca5812a7
synthetic-speed-limits.csv (speed limits)	94	4d6c230ec52bb7b1021eca3743eae821ac4766f504a781ffd1f1f53757a0ca86

The NPMRDS files were read on the computer that produced this pack and were not sent anywhere. NPMRDS's data sharing agreement lets agencies publish summaries and statistics based on the data, but not data sets or aggregated average travel time databases; this pack holds summary measures only. These are screening measures for an application; confirm them with your agency's own analysis.